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AUTHOR McCutcheon, Lynn E.
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ABSTRACT

Graphology is the systematic study of handwriting as a clue to personality. The same term has been applied to less valid studies of handwriting as pursued by those with little or no understanding of the scientific method. This paper examines this latter realm of graphology. In two studies, college students and samples of convenience were asked to use graphological cues to judge the personality of a person whose handwriting sample was content-laden. Analysis revealed that subjects with no training in handwriting analysis clearly performed much better than chance in both studies. These performances were attributed to content analysis rather than graphology, since it mattered little whether the subject, handwriting sample, or personality profile was genuine. Results also indicated a correlation between education and handwriting analysis scores. A negative relationship between education and belief in the validity of handwriting analysis as observed in the first study, implied that those least likely to believe in the validity of handwriting analysis are likely to be more educated. The demonstration outlined here required little class time, produced robust results, and can be easily repeated. (RJM)

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DEMONSTRATING HOW GRAPHOLOGY "WORKS"

Lynn E. McCutcheon

Florida Southern College

Running Head: Graphology

Note: The author is grateful to the students in his industrial psychology class for their assistance in providing input and gathering data.

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DEMONSTRATING HOW GRAPHOLOGY "WORKS"

Summary. - In two studies college students and samples of convenience were asked to use graphological cues to judge the personality of a person whose handwriting sample was content-laden. In both studies subjects did much better than chance, including those in study one who received instructions to ignore the content. The demonstration required little class time, produced robust results, and can be easily repeated.

Graphology is the systematic study of handwriting as a clue to personality (Murphy, 1949). Unfortunately, the same term has also been applied to a more popular but less systematic and less valid study of handwriting, often associated with self-appointed "experts" who have little or no understanding of the scientific method. It is the latter that comes under scrutiny here.

In spite of a meta-analytic study (Neter & Ben-Shakhar, 1989) which showed that the popular form of graphology is nearly useless, many people continue to believe in its validity, both in the U. S. and abroad (McCutcheon, Furnham & Davis, 1993). The limited successes of graphologists in predicting behavior appear to be caused not by graphology, *per se*, but by simple content analysis that can be done without any graphological training (Neter & Ben-Shakhar, 1989).

Study One. - To demonstrate the "workability" of graphology to students I took the *16 PF* (Cattell, Eber & Tatsuoka, 1970)

personality profile of person X and chose two factors on which X's scores fell in sten two (F, serious; N, forthright) and two on which X's scores fell in sten nine (B, intelligent; Q2, self-sufficient). I asked X to write a brief self-description in his normal handwriting which was consistent with each of these four sten scores.

He wrote: "I'm not the sort of person who chooses to do something just because everybody else does it. I look things over, then I decide if it makes sense for me. If not, then I don't do it, and I really don't care if lots of other people do. Sometimes it takes what must seem like a millenium to others for me to decide. I don't make decisions that have profound implications without pondering them - turning them over and over in my mind. I try to cut through the enthusiasm and hyperbole and find logical pitfalls that would render a particular course of action unwise. Once I have reached my personal verdict I'll tell anyone who asks me exactly why. I don't make up any crap, I just tell them what I think."

I reproduced this exactly as written and presented it to my psychology class along with typed instructions about examining it for individual signs (height of letters, loops, hooks, stems) and global impressions (spacing between letters and words, amount and direction of slant). Below the handwriting sample I asked them "to predict the following about the writer's personality based on your handwriting analysis. On a scale from one to ten, if 'one' is an extremely unintelligent person, 'five' or 'six' are about average, and 'ten' is an extremely intelligent person, indicate

by circling one of the ten numbers how smart you think the writer is." Appropriately worded questions and scales were provided for the serious vs happy-go-lucky, forthright vs shrewd, and group-dependent vs self-sufficient factors.

When all students were finished I gave them the correct answers and asked them to record the absolute difference between the correct answer and their answer for each of the four scales, then add the four numbers. I pointed out that on a scale from one to ten the safest guess would be 5.5 on each of the four scales. A score of 5.5 is 3.5 points from each of the correct answers, thus 14 (4 x 3.5) is the most likely total score one might obtain by chance alone.

A show of hands revealed that 13 of my 15 students had scores lower (better) than 14. Feigning amazement, I congratulated them and suggested that they had the potential to become graphologists. Then I asked if anyone could think of another explanation. After a brief pause, one student correctly surmised that the content of the handwriting had been influential. Others agreed. I pointed out that content-laden handwriting is responsible for the limited success of graphologists.

My suggestion that we expand the demonstration into a class project was endorsed and there followed a discussion with much student input. We agreed that each student would administer the questionnaire to ten subjects, and I briefly discussed how to give it and stressed the importance of obtaining a diverse sample. We further agreed to ask subjects their gender, number of years of education, and their beliefs about the validity of

handwriting analysis on a ten-point scale. Finally, we agreed to add these two sentences to the end of the instructions for half of the questionnaires. "Please ignore what the author says about himself or herself. Focus only on the criteria mentioned above."

Handwriting analysis scores of male (n=63) and female (n=87) subjects were virtually identical. The combined mean (10.89, SD= 4.12) was compared with the expected value of 14 (t149 = 9.26, p < .0001). Those subjects who received the additional instructions to ignore content (M = 11.23, SD = 4.19) did not obtain significantly worse scores than those (M = 10.55, SD = 4.04) who didn't (t148 = 1.03). The relationship between education (M years = 14, SD = 2) and belief in the accuracy of handwriting analysis (M = 5.1, SD = 2.3) was -.18 (df = 145, p <.05). The relationship between education and handwriting analysis scores was -.22 (df = 147, p <.05).

Study Two. - The second study was conducted to replicate the main findings of the first study. Particularly, it was designed to show that the tendency to be influenced by the content of handwriting generalizes to a different handwriting sample with very different content.

I constructed a hand-written statement for a fictitious person as follows: "I love parties because I get a chance to meet lots of interesting people there. If other people want to decide what activities go on at parties and when I'm out with friends, that's okay with me. I'll do just about anything responsible if they will do it first and show me how. Where I draw the line is with things that are just plain wrong. I don't cheat, or steal,

or take advantage of people who can't look out for themselves. If we all followed the golden rule the world would be a lot better off. I try to be respectful toward the police, church, and to uphold the old teachings that made this country the best place on earth." This was deliberately worded in order to be consistent with a 16 PF profile of an individual for whom two scores fall in sten two (E, submissive; Q1, conservative) and two fall in sten nine (A, outgoing; G, moralistic).

The same typed instructions used in the first study were employed again except that all the questionnaires omitted the warning to ignore what the author says about himself or herself. The same scales ranging from one to ten were used with appropriate word changes for the reserved vs outgoing, submissive vs dominant, rule-disregarding vs moralistic, and conservative vs liberal dimensions. The same questions about gender, number of years of education, and beliefs about the validity of handwriting analysis were used.

Seven out of ten students scored lower than the chance value of 14. All ten of them gave the questionnaire to four or five adult subjects each. Handwriting analysis scores of male (n = 24) and female (n = 25) subjects were similar. The combined mean (M = 9.67, SD = 3.4) was compared to the expected value of 14 (t_{48} = 8.9, $p < .0001$). The relationship between education (M years = 14.1, SD = 2.1) and belief in the accuracy of handwriting analysis (M= 4.3, SD = 2.2) was .06 (df = 47, ns).

Discussion. - Taken together, correlations between education and handwriting analysis scores suggest a weak tendency for better

educated persons to obtain more accurate handwriting analysis scores (ie. to be more influenced by content). In the first study the negative relationship between education and belief in the validity of handwriting analysis implies that those least likely to believe in the validity of handwriting analysis are likely to be more educated.

Subjects with no training in handwriting analysis clearly performed much better than chance in both studies, and even the instruction to ignore content had no significant impact on scores. Confidence in the finding that most subjects who are asked to focus on both global impressions and individual signs will nevertheless be influenced by content is reinforced by the fact that the effect was produced twice. Furthermore, it was produced using different written descriptions and personality profiles. It also appears to matter little whether the subject, handwriting sample, or personality profile is genuine or not. The technique, at least as applied to the examples used in these two studies, appears to be a dramatic and effective way to teach students that the bogus kind of graphology "works" only because the content offers valuable clues to subjects' personalities.

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